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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,723	12/07/2000	Jan Hendrik Wijngaard	H60-088 US	4532

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ORANGEBURG, NY 10962-2100

EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/735,723

Applicant(s)

WIJNGAARD ET AL.

Examiner

Sharidan Carrillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 05.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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*Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a hard material layer selected from the group consisting of an oxide, nitride, carbide, carbonitride, or carboxynitride of at least one element from Group 4, 5, 6, 13, 14 of the Periodic Table with the exclusion of TiN, an intermediate carrier layer consisting of TiN, and a layer removal solution comprising hydrogen peroxide, does not reasonably provide enablement for any type of hard material layer, any type of layer removal solution, and any type of intermediate carrier layer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Page 1, line 12 of the specification defines the hard material layer. Page 2, line 22 of the specification teaches the intermediate layer. The claims embrace an invention which contains any known hard material layer, any layer removal solution, and any known intermediate carrier layer, which could/can be selected from literally thousands. It does not appear feasible that any hard material layer, any layer removal solution, and any intermediate carrier layer would function in the present invention. Further, for one skilled in the art to reproduce the present invention, which must be possible, if the specification is adequate, there would clearly be undue experimentation to do so in an attempt to figure out which hard material layers, which removal solutions, and which intermediate carrier layers would and would not work.

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite for the following reasons. It is unclear how the intermediate layer is different from the hard material layer and the metal surface. Are the layers different in terms of size, composition, structure. What does applicant consider as being "different". Claim 1 is indefinite because it is unclear how the hard material layer is removed before it is dissolved as much as the intermediate carrier layer since the claim previously recites that the intermediate carrier layer is dissolved more than that of the hard material layer. It is unclear how the hard material layer is being removed since the pores of the hard material layer is required to apply the removal solution to the intermediate carrier layer such that the intermediate carrier layer is selectively dissolved in comparison to the hard material layer. Specifically, it is unclear how the hard material layer can be removed prior to the intermediate carrier layer since the pores of the hard material layer are required for selective dissolution of the intermediate carrier layer. Therefore the limitation of "the hard material layer is removed BEFORE it is dissolved as much as the intermediate carrier layer" renders the claim indefinite. Claim 1 is indefinite because it is unclear what applicant is trying to claim. Claim 2 is indefinite because of its dependency.

Claim 3 is indefinite because it is unclear what is  $E_n$ . It is also unclear what is  $E_x$ . If "n" is an element number, then it is unclear what one of ordinary skill would consider as  $E_n$  or  $E_x$ . Claim 3 is further indefinite because it is unclear what one of ordinary skill in the art would

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consider as the "New IUPAC notation". Claim 3 is further indefinite because it is unclear what is a running parameter. Further, it is unclear how the running parameter "n" is different from the "n" recited in line 3.

Claim 4 is indefinite because it is unclear whether "n=2" refers to the "n" recited in line 3 of claim 3 or whether "n" refers to the running parameter.

Claims 5-7 are indefinite because "the layer thickness" lacks positive antecedent basis. Claims 8, 11-12, 14-17 are indefinite because of its dependency. Claims 9-10 are indefinite because it is unclear what one of ordinary skill in the art would consider as a WC-C layer.

Claim 13 is indefinite because it is not further limiting. Claim 13 is a duplication of claim 12. Claim 18 is indefinite because it recites that the solution includes NaOH. However claim 18 is dependent on claim 15 which recites that the removal solution is a hydrogen peroxide solution, which the examiner considers as "closed language". The examiner suggests amending claim 15 to recite a removal solution comprising a "hydrogen peroxide solution". Claim 21-23 are indefinite for reasons similar to that of claim 18. Claim 23 is further indefinite because claim 15 is considered as "closed language" and therefore, other elements of water, sodium hydroxide, disodium oxalate, and Kna tartrate tetrahydrate would be excluded from the composition. Claims 19-20 are indefinite because it is unclear whether applicant is trying to claim sodium hydroxide.

5. The claims are so incomprehensible because of the indefiniteness as to preclude a reasonable search of the prior art by the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 703-308-1876. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 703-308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7719 for regular communications and 703-305-7719 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Sharidan Carrillo  
Primary Examiner  
Art Unit 1746

bsc

October 31, 2002



SHARIDAN CARRILLO  
PRIMARY EXAMINER